

Attorney Docket No.: **DEX0531US.NP**  
Inventors: **Wolfert et al.**  
Serial No.: **10/588,339**  
Filing Date: **July 18, 2007**  
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This listing of the claims will replace all prior versions and listings of claims in the application:

**Listing of the claims:**

Claims 1-72 (canceled)

Claim 73 (currently amended) A method for measuring enzymatically active Lipoprotein-associated Phospholipase A2 (Lp-PLA2) in a sample comprising the following steps in the order stated:

- (a) incubating the sample with a compound which reduces active thiol(s) in the sample for a time sufficient for said compound to reduce said active thiol(s);
- (b) contacting the incubated sample with a substrate that is converted to an active thiol product by enzymatically active Lp-PLA2 when enzymatically active Lp-PLA2 is present in the sample; and
- (c) measuring free converted active thiol product from step (b) indicative of enzymatically active Lp-PLA2 in the sample.

Claim 74 (original): The method of claim 73, wherein the sample is a serum sample, a plasma sample or an EDTA treated plasma sample.

Claim 75 (canceled)

Claim 76 (previously presented): The method of claim 73 wherein the sample is incubated at room temperature or at 37°C.

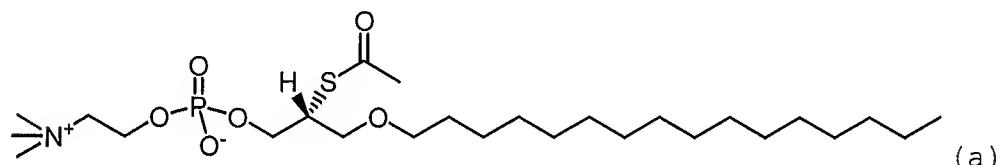
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Claim 77 (canceled)

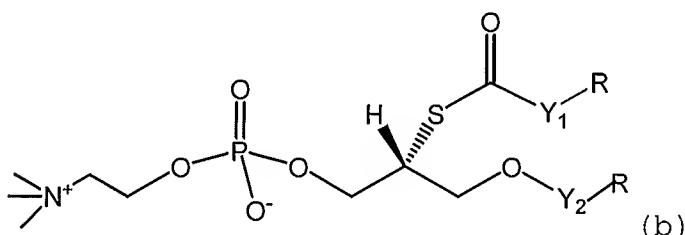
Claim 78 (original): The method of claim 73 wherein the sample is incubated from about 2 to about 120 minutes.

Claim 79 (canceled)

Claim 80. (original): The method of claim 73 wherein the substrate is selected from the group consisting of



2-thio PAF; and



wherein,

R is selected from the group consisting of  $(\text{CH}_2)_4\text{CH}_3$ ,  $(\text{CH}_2)_6\text{CH}_3$ ,  $(\text{CH}_2)_8\text{CH}_3$ ,  $(\text{CH}_2)_{10}\text{CH}_3$ ,  $(\text{CH}_2)_{12}\text{CH}_3$ ,  $(\text{CH}_2)_{14}\text{CH}_3$  and  $(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_2\text{CH}_3$ ;

$Y_1$  is selected from the group consisting of  $(CO)_{1-2}$  and  $(CH_2)_{2-7}$ ; and

$Y_2$  is selected from the group consisting of CO and  $CH_2$ .

Claim 81 (withdrawn): The method of claim 80 where in the substrate is an oxidized derivative of (a) or (b).

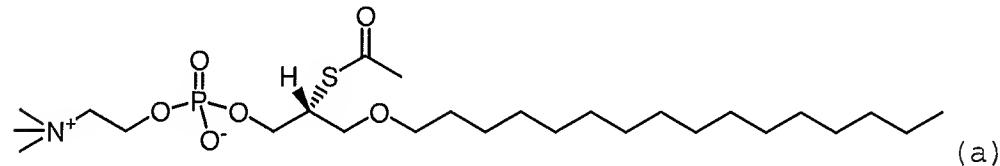
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Claim 82 (original): The method of claim 73 further comprising comparing measured free thiol product of step (c) to free thiol product in a control comprising an enzymatically active Lp-PLA2 standard.

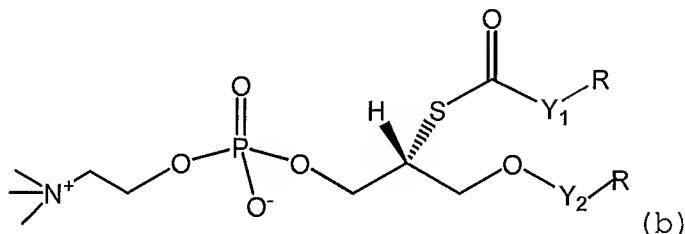
Claim 83-85 (canceled)

Claim 86 (previously presented): A kit for measuring enzymatically active Lipoprotein-associated Phospholipase A2 (Lp-PLA2) in a sample comprising a compound which reduces active thiol(s) and a substrate that reacts with enzymatically active Lp-PLA2 to produce a detectable product.

Claim 87 (original): The kit of claim 86 wherein the substrate is selected from the group consisting of



2-thio PAF; and



wherein,

R is selected from the group consisting of  $(\text{CH}_2)_4\text{CH}_3$ ,  $(\text{CH}_2)_6\text{CH}_3$ ,  $(\text{CH}_2)_8\text{CH}_3$ ,  $(\text{CH}_2)_{10}\text{CH}_3$ ,  $(\text{CH}_2)_{12}\text{CH}_3$ ,  $(\text{CH}_2)_{14}\text{CH}_3$  and

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$(CH_2)_7CH=CH(CH_2)_2CH_3$ ;

$Y_1$  is selected from the group consisting of  $(CO)_{1-2}$  and  $(CH_2)_{2-7}$ ; and

$Y_2$  is selected from the group consisting of CO and  $CH_2$ .

Claim 88 (withdrawn): The kit of claim 87 where in the substrate is an oxidized derivative of (a) or (b).

Claim 89 (original): The kit of claim 86 further comprising an enzymatically active Lp-PLA2 standard.

Claims 90-91 (canceled)

Claim 92 (previously presented): The method of claim 73, wherein said sample is from a patient.

Claim 93 (previously presented): The method of claim 92, wherein said patient is suspected of having a vascular disease.

Claim 94 (previously presented): The method of claim 93 wherein the patient is suspected of having coronary vascular disease (CVD), coronary heart disease (CHD), peripheral vascular disease, peripheral arterial disease, high blood pressure, stroke, congenital cardiovascular defects or congestive heart failure.

Claim 95 (previously presented): The method of claim 92, wherein elevated levels of enzymatically active Lp-PLA2 in said sample is indicative of the patient having a vascular disease.

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Claim 96 (previously presented): The method of claim 95, wherein elevated levels of enzymatically active Lp-PLA2 in said sample is indicative of the patient having coronary vascular disease (CVD), coronary heart disease (CHD), peripheral vascular disease, peripheral arterial disease, high blood pressure, stroke, congenital cardiovascular defects or congestive heart failure.

Claim 97 (previously presented): The method of claim 92, wherein the patient has been administered an Lp-PLA2 inhibitor.

Claim 98 (previously presented): The method of claim 92, wherein the patient has been administered an Lp-PLA2 inhibitor and measured enzymatically active Lipoprotein-associated Phospholipase A2 (Lp-PLA2) levels in the sample are indicative of the patient's response to the Lp-PLA2 inhibitor.

Claim 99 (previously presented): The kit of claim 86, wherein the sample measured for enzymatically active Lipoprotein-associated Phospholipase A2 (Lp-PLA2) is from a patient.

Claim 100 (previously presented): The kit of claim 99, wherein the patient is suspected of having a vascular disease.

Claim 101 (previously presented): The kit of claim 100 wherein the patient is suspected of having coronary vascular disease (CVD), coronary heart disease (CHD), peripheral vascular disease, peripheral arterial disease, high blood pressure,

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stroke, congenital cardiovascular defects or congestive heart failure.

Claim 102 (previously presented): The kit of claim 99, wherein the patient has been administered an Lp-PLA2 inhibitor.

Claim 103 (previously presented): The kit of claim 99, wherein the patient has been administered an Lp-PLA2 inhibitor and measured enzymatically active Lipoprotein-associated Phospholipase A2 (Lp-PLA2) levels are indicative of the patient's response to the Lp-PLA2 inhibitor.